gain in lessening mortality as great as that shown by the previously mentioned use of fluids. The use of this tube for postoperative or toxic vomiting, beginning dilatation of the stomach, postoperative ileus or intestinal obstruction will be found to be the most useful new procedure of the day. Bassler [5] said in addressing the Southern Surgical Association: "If I leave no message with you but the use of transduodenal lavage in postoperative ileus, I feel that my paper has not been in vain. Its employment is of distinct advantage and will bring happiness to you."

The recognition that the serious symptoms of peritonitis are those of a potential intestinal obstruction, the employment of fluids subcutaneously and intravenously in 2800 to 4000 cc. amounts in twenty-four hours and the use of the Jutte tube for upper gastrointestinal drainage and lavage marks a new era of progress in the treatment of acute peritonitis.

JOHN HOMER WOOLSEY.

5. Bassler, A.: The Use of the Duodenal Tube, etc., South. Med. Jour., January, 1919, XII, 4-7.

Tuberculosis

IN a masterful summary of our knowledge of many important phases of tuberculosis at the fifth conference of the International Union Against Tuberculosis recently, Krause [1] brought out that tubercle is the anatomical response of the body to tubercle bacilli, and may be conceived as of two types: (*a*) nodular tubercle, which represents the native anatomical response of the tissues, and (*b*) non-nodular tubercle, representing an anatomical response acquired as the result of the previous formation of the nodular tubercle.

Tubercle bacilli, continued the speaker, are sluggish in development. They contain proteins, and *combined with them* a high content of lipoids, the chief of which is a very refractory wax. By virtue of these lipoids they are very resistant to outside agencies.

When they settle in the tissues for the first time the tissues react to their presence by forming nodular tubercle, which is their native method of dealing with foreign bodies which they cannot dispose of by direct disintegration. Because of the insolubility of the lipoids, tubercle bacilli act as foreign bodies in the tissues. Nodular tubercle is therefore a protective and conservative process, serving to wall off the tubercle bacilli and set them apart from normal tissues—encapsulation and fibrosis—and also confine the products of the breaking down of cells within itself.

The outstanding processes in tubercle formation are the multiplication of the fixed cells, particularly the epithelioid (connective tissue) type, and the formation of a fibrous tissue capsule. In the 90 per cent and more of tuberculous infections which do not become active it performs the function of protection successfully. Nodular tubercle evolves slowly out of the proliferation of cells in situ. The tissues form nodular tubercle around living or dead tubercle bacilli, or even nonbacterial foreign bodies, and structurally and anatomically it constitutes tuberculosis, but is not dangerous because powerless to spread unless the tubercle bacilli are living. It is a reaction to the *lipoids* of the bacilli.

With the presence of tubercle bacilli in the body, as represented by the establishment of nodular tubercle, the tissues acquire a new and added method of reacting to tubercle bacilli. This new capacity of tissue reaction is to the *proteins* of the tubercle bacilli, and the changed condition of the tissues is called *tissue allergy* or *tissue hypersensitiveness,* the reaction elicited being the *allergic reaction.* The allergic reaction brings about diffuse tissue changes —those of acute inflammation.

(The phenomena of allergy are best demonstrated by the intracutaneous inoculation of a guinea-pig with virulent tubercle bacilli. In the normal (nonallergic) animal there is a slight inflammation at the site of inoculation, which subsides in a few hours. About the seventh day a papule appears, which develops into a well-defined nodule about the fifteenth day, and is followed by ulceration. In the previously infected (allergic) guinea-pig the initial inflammation persists and increases for several days. Nodule formation takes place in four to five days, being fully developed by the tenth day. If the dose be sufficiently large, necrosis and ulceration take place in two to four days after inoculation. These phenomena are the basis of the tuberculin reactions.

(It has been shown [2] that allergy exercises a striking effect on the rate of dissemination of tubercle bacilli. Following their intracutaneous injection into normal guinea-pigs, the regional lymph glands are involved in twenty-four hours or less. In the allergic guinea-pig most of the bacilli are permanently fixed at the site of inoculation because of the prompt inflammatory reaction, and the glands are not involved for at least four days. C. C. B.)

CHARLES C. BROWNING.

1. Allen K. Krause, Associate Professor of Medicine and Director Kenneth Dows Laboratories, Johns Hopkins University; Editor, National Review of Tuberculosis; Associate Editor, Journal of the Outdoor Life (address on the Anatomical Structure of Tubercle from Histogenesis to Cavity before the fifth conference of the International Union Against Tuberculosis at Washington, October 1, 1926).

2. Willis: Am. Review Tb., 1925, XI, pp. 427, 439.

THERE are few situations which the physician has to meet that so tax his therapeutic ingenuity as laryngitis in a patient already burdened by a long and wearing battle with lung tuberculosis.

Homer van Horne [1] lays great stress on the use of voice rest in the treatment of this most distressing complication.

"The most important measure to be insisted upon," he says, "is absolute voice rest from the beginning and regardless of the extent of laryngeal involvement.

Absolute voice rest does not mean merely refraining from using the spoken voice; it means silence. Whispered words are often as great a strain on the larynx as the spoken voice and sometimes more so.

Such patients are apt to be loquacious and they

1. Some observations upon the treatment of laryngeal tuberculosis. U. S. Veterans' Bureau Medical Bulletin, November, 1926, p. 1027.

must be cautioned not only against speaking, but against whispering as well, and supplied with paper and pencil with which to communicate with their attendants.

The successful treatment of tuberculous laryngitis requires that the condition should be recognized early. As in all tuberculous manifestations, a late condition is often an incurable one and a constant watch must be maintained in all patients with lung tuberculosis to make sure that the earliest involvement of the vocal cords shall be recognized and combated.

In addition to voice rest, cleansing sprays and local anesthetics are of value for advanced ulcerative laryngitis.

Heliotherapy is of great value, but the dose of sun rays must be as carefully controlled as the dose of tuberculin if a good effect is to be produced. Great care must be used that the period of insolation does not produce too great reaction and that sufficient time elapses before the next exposure for the reaction to subside.

Blocking the superior laryngeal nerve in those patients whose severe pain prevents swallowing is simple and, I believe, should be tried in all patients in whom other means fail to overcome the painful deglutition. It is successful in only 50 per cent of cases in which it is attempted, but relief is wonderful when the nerve can be located and anesthetized.

Another procedure that often relieves the pain of swallowing is for a trained person to stand behind the patient and at the moment of swallowing to make firm and even pressure forward on the angle of the jaws.

Or the patient may take the so-called Wolfenden's position while eating. That is, he lies prone upon the bed with his head hanging over the side and sucks his nourishment through a tube from a glass placed on the floor.

Too often the progress of the disease cannot be controlled when it is discovered late, but the most distressing symptom, pain on swallowing, can usually be relieved in whole or in part by the use of some of these measures.

LEWIS SAYRE MACE.

THE Veterans' Bureau and Tuberculosis—Regulation No. 150 by the United States Veterans' Bureau relative to the rating of disability from arrested tuberculous disease states that "an ex-service person shown to have had a service-connected tuberculous disease of a compensable degree, who is found to have reached a condition of complete arrest of his disease, will receive compensation of not less than $50 per month." Inasmuch as it is still possible for an ex-service person to obtain compensation for tuberculous disease not previously service connected, provided he or she obtains affidavits from physicians stating that such disease existed in an active form prior to January 1, 1925, this regulation should possess some interest for physicians.

When approached for an affidavit of this type one should bear in mind that he may be dealing with an individual anxious to have a diagnosis of tuberculosis. This is exactly the reverse state of mind of the ordinary private or clinic patient. It is also well to remember that in the desire to make diagnoses of tuberculosis early one is sometimes tempted to give this diagnosis on insufficient evidence. Thus a slight elevation of afternoon or evening temperature without other discoverable cause is sometimes the only basis for a diagnosis of tuberculosis.

Loose diagnoses of this sort, always deplorable, are particularly damaging in ex-service people. It not only tends to produce an undesirable psychic state in the patient, but may work a grave injustice to the government. The latter, particularly, since the issuance of regulation No. 150 assures a degree of permanent disability not previously existent.

Another point which should make one careful in this matter is the well-known fact that a negative physical examination and roentgenogram may not justify the most skillful observer to state that true tuberculous disease never has existed.

In general, in dealing with questions of this sort it would seem wise to apply the criteria of the Saranac group that one or more of five major points are necessary in diagnosing true clinical pulmonary tuberculosis: 1. Sputum positive for tubercle bacilli. 2. A *substantiated* history of hemoptysis of a drachm or more without other discoverable cause. 3. Pleurisy with effusion or a *substantiated* history of dry pleurisy not occurring during an epidemic of respiratory disease. 4. The characteristic rales of pulmonary tuberculosis. 5. Parenchymatous lesion by x-ray.

To which might be added: spontaneous pneumothorax without other discoverable cause.

SIDNEY J. SHIPMAN.

If all illness is to be carried without question by the community, it will often be very hard to decide just where health stops and sickness begins. Few are 100 per cent ill, and none of us are 100 per cent well. Every doctor knows that in hard times especially, a differential diagnosis has often to be made between sickness and unemployment, or sickness and imagined sickness, or sickness and a chronic disinclination for work, or sickness and some complex of circumstances that sickness would provide a welcome escape from. It is wonderful what persistence and ingenuity will do in establishing a malingerer as a public charge. Men of not much health, but plenty of "gumption" will work every day, while men of better health but less "gumption" have meals served them in hospital wards. The work of the world is done by people less than 100 per cent well and always has been.—*Canad. M. A. J.*

In the face of ubiquitous talk about the lengthening of the span of life, Doctor Nicoll does well to remind us that it is the maintenance of health, rather than mere longevity, to which we should aspire. Life itself is worth little when our usefulness has ceased. By making health, rather than sustained existence, our goal we build not only for a longer life, but for a fuller and richer one as well. This is the ultimate ideal of public health.—New York *Med. Week.*

The medical profession is a combination of individuals having marked energy, considerable ability, and good average educational attainments. We have accomplished much in the past few decades, and in the years to come there is no doubt we shall continue to drive forward and become more efficient through the inspiration of the men who are to be our leaders.—*Medical Standard.*